

AMENDMENT TO THE CLAIMS

1. (Currently amended) A method of treating a human patient suffering from Parkinson's disease, said method comprising the steps of:

- (a) obtaining one or more embryonic stem cells;
- (b) transfecting said stem cells with a nucleic acid encoding Nurr-1;
- (c) ~~culturing~~ expanding said stem cells of step (b) ~~to form cells which are lineage-restricted to dopaminergic neurons~~; and
- (d) engrafting into said patient said ~~lineage-restricted~~ cells of step (c).

Claims 2-3: Cancelled.

4. (Previously presented) The method of claim 1, wherein step (c) comprises inducing cell division using a growth factor.

5. (Original) The method of claim 4, wherein said growth factor is leukemia inhibitory factor.

Claims 6-11: Cancelled.

12. (Currently amended) The method of claim 1, wherein step (c) ~~further~~ comprises ~~culturing~~ expanding said stem cells in the presence of fibroblast growth factor-8 (FGF-8).

13. (Currently amended) The method of claim 1, wherein step (c) ~~further~~ comprises ~~culturing~~ expanding said stem cells in the presence of sonic hedgehog (Shh).

14. (Currently amended) A method of treating a human patient suffering from Parkinson's disease, said method comprising the steps of:

- (a) obtaining one or more embryonic stem cells;
- (b) transfecting said stem cells with a nucleic acid encoding PTX-3;
- (c) ~~culturing~~ expanding said stem cells of step (b) ~~to form cells which are lineage-restricted to dopaminergic neurons~~; and
- (d) engrafting into said patient said ~~lineage-restricted~~ cells of step (c).

15. (Previously presented) The method of claim 14, wherein step (c) comprises inducing cell division using a growth factor.

16. (Previously presented) The method of claim 15, wherein said growth factor is leukemia inhibitory factor.

17. (Currently amended) The method of claim 15, wherein step (c) ~~further~~ comprises ~~culturing~~ expanding said stem cells in the presence of fibroblast growth factor-8 (FGF-8).

18. (Currently amended) The method of claim 15, wherein step (c) ~~further~~ comprises ~~culturing~~ expanding said stem cells in the presence of sonic hedgehog (Shh).

19. (Currently amended) A method of treating a human patient suffering from Parkinson's disease, said method comprising the steps of:

- (a) providing recombinant progenitor cells which are lineage-restricted to dopaminergic neurons, and
- (b) engrafting into said patient said ~~lineage-restricted~~ recombinant cells of step (a).

20. (Currently amended) The method of claim 19, wherein said recombinant cells are embryonic stem cells or are derived from embryonic stem cells transfected with a nucleic acid encoding Nurr-1.

21. (Currently amended) The method of claim 19, wherein said recombinant cells are embryonic stem cells or are derived from embryonic stem cells transfected with a nucleic acid encoding PTX-3.

22. (Currently amended) The method of claim 19, wherein said recombinant cells are embryonic stem cells or are derived from embryonic stem cells transfected with a nucleic acid encoding Nurr-1 and [[PTX]] a nucleic acid encoding PTX-3.

23. (New) The method of claim 19, wherein said recombinant cells are embryonic stem cells or are derived from embryonic stem cells transfected with a nucleic acid encoding Nurr-1 and PTX-3.

24. (New) The method of claim 19, wherein said recombinant cells are embryonic stem cells or are derived from embryonic stem cells transfected with a nucleic acid encoding Nurr-1 and a nucleic acid encoding PTX-3.